

Commodity Movements Originating in Arizona: 1993

In Arizona, the CFS measured \$69 billion of goods weighing 84 million tons. Arizona accounted for approximately 1 percent of the value and weight of total U.S. shipments. See attached table. The CFS data cover shipments by establishments in mining, manufacturing, wholesale, and selected retail and service industries. The data exclude most shipments of crude oil; therefore, the totals and percentages do not fully reflect the contribution of pipeline shipments.

The major commodities shipped by establishments in Arizona vary when ranked by value and by weight of the shipments. High-value commodities such as apparel or other textile products account for a higher proportion of total value and a lower proportion of total weight of shipments. The top five commodities by value were: apparel or other textile products, food and kindred products, electrical machinery and equipment, transportation equipment, and primary metal products. The top five commodities by weight were: clay, concrete, glass or stone; nonmetallic minerals; petroleum or coal products; food and kindred products; and metallic ores.

Local transportation of freight is important to Arizona's commerce. The distribution of commodities by domestic destination and distance of shipments reflects the importance of local transport. The CFS shows that in 1993, about 43 percent of the value and 77 percent of the weight of total shipments from Arizona were shipped to destinations within the state. About 30 percent of the value and about 53 percent of the weight of all shipments were between places less than 50 miles apart. In comparison, about 30 percent of the value and 56 percent of the weight of total U.S. shipments were between places less than 50 miles apart. In Arizona, over one-third (37 percent) of the value of shipments and over two-thirds (70 percent) of the weight of shipments were between places less than 100 miles apart.

Over half (57 percent) of the value and less than one-quarter (23 percent) of the weight of all shipments from Arizona were to other states. The top five destinations by value of shipments were: California, Texas, New Mexico, Nevada, and New York. The top five destinations by weight of shipments were: Nevada, California, New Mexico, Texas, and Indiana.

Most commodities (72 percent of the value and 65 percent of the weight) were moved by trucks. Rail accounted for about 5 percent of the value and 23 percent of the weight of shipments. The CFS data confirm the rising importance of parcel, U.S. postal, and courier services that have emerged in recent years. In 1993, this mode of transport was used to move 126 thousand tons of goods worth about \$5 billion or 7 percent of the value of all shipments in Arizona. In comparison, about 9 percent of the value of total U.S. shipments were moved by this mode.

Arizona: 1993 Commodity Flow Survey
 Tabulation by the Bureau of Transportation Statistics, U.S. Dept. of Transportation, March 1996

Summary	Value	Weight
Arizona: Total Shipment	\$68.6 billion	84.0 million tons
Percent of Total U.S. Shipments Measured in the CFS (preliminary estimate from Census)	1.1%	0.9%

Commodities Shipped from Arizona Ranked by Value		Commodities Shipped from Arizona Ranked by Weight	
Commodity	Percent of Value	Commodity	Percent of Weight
Apparel or other textile products	19.0%	Clay, concrete, glass, or stone	16.1%
Food and kindred products	12.0%	Nonmetallic minerals	15.6%
Electrical machinery & equipment	10.9%	Petroleum or coal products	13.0%
Transportation equipment	9.0%	Food and kindred products	10.1%
Primary metal products	7.6%	Metallic ores	8.6%
Other Commodities	41.5%	Other Commodities	36.6%
Total	100.0%	Total	100.0%

Domestic Destinations of Shipments from Arizona Ranked by Value		Domestic Destinations of Shipments from Arizona Ranked by Weight	
State	Percent of Value	State	Percent of Weight
Arizona	42.7%	Arizona	77.0%
California	16.6%	Nevada	9.7%
Texas	8.5%	California	5.6%
New Mexico	5.7%	New Mexico	1.9%
Nevada	4.1%	Texas	1.9%
Other States	22.4%	Other States	3.9%
Total	100.0%	Total	100.0%

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Means of Transportation for Shipments Originating in Arizona		
Modes	Percent of Value	Percent of Weight
Parcel, U.S. Postal Service, or courier service	7.4%	0.2%
Truck (for-hire, private, and both private truck and for-hire truck)	72.2%	65.3%
Air (including truck and air)	8.7%	0.1%
Rail	4.8%	23.0%
Water (inland, Great Lakes, deep sea, truck & water, and rail & water)	-	-
Pipeline*	**	**
Truck and rail	**	**
Other intermodal (truck&pipeline, inland&Gt. Lakes, inland&deep sea) ...	-	-
Other, unknown, and withheld for sampling and disclosure reasons	6.9%	11.4%
Total	100.0%	100.0%

Domestic Distance Shipped for Commodities Originating in Arizona		
Distance	Percent of Value	Percent of Weight
Less than 50 miles	29.3%	52.7%
50 to 99 miles	7.4%	18.2%
100 to 249 miles	8.1%	8.0%
250 to 499 miles	24.8%	15.2%
500 to 749 miles	5.7%	1.8%
750 to 999 miles	5.7%	1.2%
1,000 to 1,499 miles	8.3%	1.3%
1,500 to 1,999 miles	6.6%	1.2%
2,000 miles or more	4.1%	0.4%
Total	100.0%	100.0%

* CFS data for pipelines exclude most shipments of crude oil.

** Some or all data in this category have been suppressed by Census to avoid disclosure or because data are statistically unreliable.

- Represents zero or less than 1 unit of measurement.

The Commodity Flow Survey (CFS) is a comprehensive effort to learn where and how goods are shipped in the U.S. The CFS measures shipments of commodities by establishments with paid employees and engaged in manufacturing, mining, wholesale trade, or selected retail and services industries. Prior commodity surveys covered shipments only by manufacturing firms. Commodity flows are estimated for a universe of approximately 900,000 establishments.

Data collected on individual shipments include total value, total weight, commodity type, modes of transport, domestic origin and destination; data for export shipments include the city and country of destination, mode and port of exit. Information is also be obtained on whether shipments are containerized or a hazardous material. Some firms provided data concerning on-site shipping facilities and access to shipping facilities, plus data on ownership and leasing of transportation equipment.

The CFS is conducted by the Bureau of the Census as part of the Economic Census. Funding and technical guidance is provided by the U.S. Department of Transportation. Initiated for 1993, the CFS is scheduled for 1997 and every 5 years thereafter for years ending in "2" and "7." Commodity surveys were conducted between 1963 and 1982, but data for 1982 were not published. No data were collected for 1987. Participants will report for a sample of shipments during a 2-week period each quarter during the reporting year.

The CFS is a mail-out/mail-back survey of 200,000 sampled employer establishments in selected industries. Establishments were selected by stratified sample, with strata based on geographic location and industry. Geographic strata are the 89 National Transportation Analysis Regions (NTARs), which provide nationwide coverage and are aggregations of Bureau of Economic Analysis economic areas. Within the strata, all establishments with annualized employment above a specified cutoff were selected with certainty, and the remaining smaller establishments were sampled with probability proportional to annualized payroll.

For 1993, each sampled establishment reported on a sample of individual shipments during a 2 week period in each calendar quarter. In addition, about 20,000 establishments will provide information on transportation facilities and arrangements in their final reporting period.

For further information about survey design and printed products, contact the Commodity Flow Survey Branch, Services Division, Bureau of the Census, Washington, DC 20233, or by calling 301/457-2805 or 2114. For information on related data programs and studies, contact the Bureau of Transportation Statistics at 202/366-DATA for voice, 202/366-3640 for fax, or CFS@BTS.GOV for e-mail.